having an outer race 42 and an inner race 44 as shown. The outer bearing housing 32 is thus fixed in relation to the mixing vessel flange 7 and does not rotate.

Please replace the paragraphs located at page 8, lines 8 and 17 respectively, with the following two paragraphs:

In the preferred embodiment, the upper bearing 34 is a tapered roller bearing canted in the angular direction illustrated (i.e., upwardly away from the mixer shaft 12). The lower bearing 40 in this embodiment is also a tapered roller bearing canted as illustrated (i.e., downwardly away from the mixer shaft 12). The feature of angling the roller bearings 34, 40 opposite to each other provides a significant improvement over the prior art, because the bearings 34, 40 can provide improved radial and axial load handling, and further can resist bending along the length of the shaft 12 between the bearings 34, 40. This in turn provides a desirable resistance against bending along the mixer shaft 12, particularly relatively near the bearing locations, for example, at the location of the upper stationary sealing ring 31.

In the illustrated preferred embodiment, the present invention provides resistance against axial, radial, and bending movement. The use of tapered roller bearings particularly enhances the axial restraining performance of the bearing arrangement. The tapered roller bearings also provide desirable lateral restraining ability. The provision of two sets of roller bearings, one spaced above the other in the axial direction along the mixer shaft 12, provides a restraining force at two different axial locations, thereby reacting to bending loads along the shaft. This restraining effect also tends to keep the mixer shaft 12 in a sufficiently linear condition at areas of the mixer shaft 12 relatively adjacent to the bearings. In this way, the arrangement of the bearings shown in the preferred embodiment of FIG. 1 improves the restraining ability of the bearing assembly in the area of the mixer shaft 12 near the seal assembly 28 as well. This

restraining effect can reduce wear on the seal, thereby improving seal lifetime, and providing a better sealing effect during the life of the seal. A flexible coupling 18 may be used as shown to accommodate any misalignments between the coupled shafts.

Please replace the paragraphs located at page, lines 10 and 16 respectively, with the following two paragraphs:

FIG. 2 illustrates the above described components in exploded view, including the mixer shaft 12 having the lower flange 14 and the coupling 18. The housing base 22 and the seal housing top 26 that retain the seal assembly 28 are shown. Also shown is the outer bearing housing 32 which retains the upper bearing 34 and the lower bearing 40 against the and inner bearing housing 46 which surrounds a portion of the mixer shaft 12.

FIG. 3 schematically depicts a bearing and seal assembly 10 as illustrated in FIGS. 1 and 2 being installed in an opening of atop wall of a mixer vessel 8, with a drive system 60 having a drive shaft 20 connected to the top end of the mixer shaft 12. The lower end of the mixer shaft 12 is connected to an impeller shaft 16 that has impellers 52 mounted thereon. In a preferred embodiment, the drive system 60 is an electric motor and speed reducer.

IN THE ABSTRACT

An assembly for supporting a mixer shaft in an opening in a vessel wall having a support mounted to the vessel wall around the opening and a seal ring supported by the support that engages a circumference of the mixer shaft with a sealing contact. A first tapered roller bearing is mounted to the support that surrounds and supports the mixer shaft at one axial location thereof and a second tapered roller bearing is mounted to the support that surrounds and supports the mixer shaft at a second axial location thereof.